

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for switching a type of a transmission scheme to a point-to-multipoint (PTM) scheme, by a Node B, which provides an MBMS (Multimedia Broadcast/Multicast Service) service to at least one user equipment (UE) in a point-to-point (PTP) scheme as the transmission scheme, in a mobile communication system including the at least one UE located in a cell, the UE receiving the MBMS service via the cell, and a radio network controller (RNC) providing the MBMS service to the at least one UE via the cell, the mobile communication system determining the type of the transmission scheme according to a the number of the at least one UE receiving the MBMS service within the cell, the method comprising the steps of:

receiving, by the Node B ~~at least one UE~~, a measurement command from the RNC;
upon receiving the measurement command, measuring, by the Node B ~~at least one UE~~, total transmission power of a dedicated channel providing the MBMS service, for the cell; and
receiving, by the Node B ~~at least one UE~~, a power threshold and a waiting time provided from the RNC before receiving the measurement command, and sending a request for switching the transmission scheme to the RNC, if the measured total transmission power exceeds the power threshold for the waiting time.

2. (Currently Amended) The method of claim 1, further comprising the step of, upon receiving a measurement delete command in response to the transmission scheme switching request, suspending, by the Node B, measurement of the total transmission power and then assigning a radio resource for providing the MBMS service in the PTM scheme.

3. (Original) The method of claim 1, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme and Node B communication context (NBCC) identifier information for identifying the at least one UE receiving the MBMS service.

4. (Original) The method of claim 1, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme as radio link information desired to be excluded from the measurement, and NBCC identifier information for identifying the at least one UE receiving the MBMS service.

5. (Original) The method of claim 3, wherein the transmission scheme switching request is transmitted along with a measurement identifier corresponding to the radio link identifier and the NBCC identifier.

6. (Original) The method of claim 1, wherein the power threshold and the waiting time are provided during initialization for measurement of the total transmission power.

7. (Original) The method of claim 1, wherein the transmission scheme switching request is determined by reporting the measurement result.

8. (Currently Amended) A method for switching a type of a transmission scheme to a point-to-multipoint (PTM) scheme by a radio network controller (RNC), which provides an MBMS (Multimedia Broadcast/Multicast Service) service to at least one user equipment (UE) in a point-to-point PTP scheme as the transmission scheme, in a mobile communication system including the at least one UE located in a cell in a Node B, the at least one UE receiving the MBMS service via the cell, and the RNC providing the MBMS service to the at least one UE via the Node B, the mobile communication system determining the type of the transmission scheme according to ~~a~~ the number of the at least one UE receiving the MBMS service within the cell, the method comprising the steps of:

providing, by the RNC, a power threshold and a waiting time to the Node B, and issuing a command to measure total transmission power of a dedicated channel providing the MBMS service in the cell;

receiving, by the RNC, a report on the measurement result from the Node B, in which the total transmission power measured in response to the measurement command exceeds the power threshold for the waiting time; and

switching, by the RNC, the type of the transmission scheme to the PTM scheme upon receiving the report on the measurement result.

9. (Original) The method of claim 8, wherein upon receiving the report on the measurement result, the RNC transmits a command to suspend measurement of the total transmission power to the Node B and assigns a radio resource for providing the MBMS service in the PTM scheme, thereby switching the type of the transmission scheme to the PTM scheme.

10. (Original) The method of claim 8, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTM scheme, and Node B communication context (NBCC) identifier information for identifying the UE receiving the MBMS service.

11. (Original) The method of claim 8, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme as radio link information desired to be excluded from the measurement, and NBCC identifier information for identifying the UE receiving the MBMS service.

12. (Original) The method of claim 10, wherein the measurement result report is transmitted along with a measurement identifier corresponding to the radio link identifier and the NBCC identifier.

13. (Original) The method of claim 8, wherein the power threshold and the waiting time are provided during initialization for measurement of the total transmission power.

14. (Currently Amended) A method for switching a transmission scheme for providing an MBMS (Multimedia Broadcast/Multicast Service) service to a particular cell from a point-to-point (PTP) scheme to a point-to-multipoint (PTM) scheme, in a mobile communication system including at least one user equipment (UE) located in a cell in a Node B, the at least one UE receiving the MBMS service via the cell, and a radio network controller (RNC) providing the MBMS service to the at least one UE via the Node B, the mobile communication system determining the type of the transmission scheme according to ~~a~~ the number of the at least one UE receiving the MBMS service within the cell, the method comprising the steps of:

providing, by the RNC, a power threshold and a waiting time to the Node B, and issuing a command to measure total transmission power of a dedicated channel providing the MBMS service in the cell;

upon receiving the measurement command, measuring, by the Node B, total transmission power of a dedicated channel providing the MBMS service for the cell, and transmitting a report on the measurement result to the RNC, if the measured total transmission power exceeds the power threshold for the waiting time; and

switching, by the RNC, the type of the transmission scheme to the PTM scheme based on the report on the measurement result.

15. (Original) The method of claim 14, wherein the step of switching the type of the transmission scheme comprises the steps of:

sending, by the RNC, a command to suspend measurement of the total transmission power, to the Node B; and

assigning, by the RNC, a radio resource for providing the MBMS service in the PTM scheme.

16. (Original) The method of claim 14, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTM scheme, and Node B communication context (NBCC) identifier information for identifying the UE receiving the MBMS service.

17. (Original) The method of claim 14, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme as radio link information desired to be excluded from the measurement, and NBCC identifier information for identifying the UE receiving the MBMS service.

18. (Original) The method of claim 16, wherein the measurement result report is transmitted along with a measurement identifier corresponding to the radio link identifier and the NBCC identifier.

19. (Original) The method of claim 14, wherein the power threshold and the waiting time are provided during initialization for measurement of the total transmission power.

20. (Currently Amended) A method for switching a type of a transmission scheme to a point-to-multipoint (PTM) scheme by a radio network controller (RNC), which provides an MBMS (Multimedia Broadcast/Multicast Service) service to at least one user equipment (UE) in a point-to-point (PTP) scheme as the transmission scheme, in a mobile communication system including the at least one UE located in a cell in a Node B, the at least one UE receiving the MBMS service via the cell, and the RNC providing the MBMS service to the at least one UE via the Node B, the mobile communication system determining the type of the transmission scheme according to a the number of the at least one UE receiving the MBMS service within the cell, the method comprising the steps of:

transmitting, from the RNC to the Node B, a command to measure total transmission power of a dedicated channel providing the MBMS service in the cell;

receiving, by the RNC, a report on the total transmission power measured in response to the measurement command from the Node B; and

switching, by the RNC, the type of the transmission scheme to the PTM scheme, if the reported total transmission power exceeds a predetermined power threshold for a predetermined waiting time.

21. (Original) The method of claim 20, wherein the step of switching the type of the transmission scheme comprises the steps of:

transmitting a command to suspend measurement of the total transmission power, from the RNC to the Node B; and
assigning a radio resource for providing the MBMS service in the PTM scheme.

22. (Original) The method of claim 20, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme, and Node B communication context (NBCC) identifier information for identifying the UE receiving the MBMS service.

23. (Original) The method of claim 20, wherein the measurement command comprises radio link identifier information for identifying at least one dedicated channel providing the MBMS service in the PTP scheme as radio link information desired to be excluded from the measurement, and NBCC identifier information for identifying the UE receiving the MBMS service.

24. (Original) The method of claim 22, wherein the measurement result report is transmitted along with a measurement identifier corresponding to the radio link identifier and the NBCC identifier.

25. (Original) A method for determining a transmission scheme for an MBMS (Multimedia Broadcast/Multicast Service) service to at least one user equipment (UE) by a radio network controller (RNC) in a mobile communication system including the at least one UE located in a cell of a particular Node B, the at least one UE receiving the MBMS service via the cell, and the RNC providing the MBMS service to the at least one UE via the Node B, the method comprising the steps of:

transmitting, to the Node B, a measurement command to measure total transmission power of a dedicated channel providing the MBMS service in the cell;

determining whether a number of the at least one UE receiving the MBMS service within the cell reaches a predetermined threshold; and

determining a point-to-multipoint (PTM) scheme as a type of the transmission scheme, if the number of the at least one UE reaches the predetermined threshold and the total transmission power measured by the Node B in response to the measurement request exceeds a predetermined power threshold for a predetermined waiting time.